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- iv) identifying a previous optical-to-electrical conversion node in said membership list;
- v) determining photonic cells of said previous optical-to-electrical conversion node; and
- vi) determining the first node outside said photonic cells of said previous optical-to-electrical conversion node along said optical route as said optical-to-electrical conversion node.

28. (new) The computer readable medium as claimed in claim 20, wherein said information of said photonic cells are stored in an centralized database;

29. (new) The computer readable medium as claimed in claim 20, wherein said information of said photonic cells are distributed in a routing protocol.

#### **REMARKS**

The present application contains claims 1-7, 10-29.

Applicant has cancelled claims 8 and 9 without prejudice.

Applicant has amended claims 1 to 7, and added claims 10 to 29.

The amendment to the claims is fully supported by the application as originally filed. No new matter has been introduced by way of the amendment. Support for the amended claim 1, and new claims 10 and 20 can be found, for example, on page 5, lines 10-11, and page 6, lines 13 – 26; Support for the amended claim 2, and new claims 11 and 21 can be found, for example, on page 4, lines 21-24; Support for the amended claim 3, and new claims 12 and 22 can be found, for example, in Figure 3; Support for the amended claims 4 and 5, and new claims 13, 14, 23 and 24 can be found, for example, on page 6, lines 13 –26 and page 7, lines 1 to 6; Support for the amended claim 6, and new claims 18 and 28 can be found, for example, on page 7, lines 10-13; Support for the amended claim 7, and new claims 19 and 29 can be found, for example, on page 7, lines 14-17; Support for the new claims 15 and 25 can be found, for example, on page 5, line 25 to page 6, line 5, and in Figure 1; Support for the new claims 16, 17, 26 and 27 can be found, for example, on page 7, lines 1 to 6, and throughout the disclosure.

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The Examiner rejected claims 1-9 under U.S.C. 102 (e) as being anticipated by Smith (U.S. Publication No. 20020196490), hereinafter referred to as Smith. The Examiner stated that Smith discloses the photonic cell as claimed.

Applicant respectfully requests reconsideration and withdrawal of this objection in view of the amendments made herein and the following comments.

Applicant submits that the present invention, as amended, is directed to the routing of optical paths based on the information of the photonic cells in an optical network. The information related to the optical reach of the base node of the photonic cell is usually based on link budget calculation during link engineering. This information, according to the present invention, is part of the photonic cell, and is readily available during the routing of an optical path.

Applicant submits that Smith does not teach or suggest photonic cell with the optical reach information as disclosed in present application. Smith is directed to an optical system with a first and second network tiers. The first network tier includes major nodes optically interconnected. The second network tier includes minor nodes disposed along the transmission path and the minor nodes are connected to at least one of the major nodes. More specifically, Smith relates to wavelength allocation in multidimensional wavelength division multiplexed ("WDM") optical transmission systems, with the use of wavebands or spectral group routers ("SGRs").

It is thus respectfully submitted that the invention taught and defined herein by the revised claims embodies patentable subject matter. The Examiner is earnestly solicited to give favourable reconsideration to this application and pass it to allowance. If the Office finds appropriate, the undersigned would welcome a telephone interview to discuss any matter relating to the Response.

Respectfully Submitted,

Dallas F. Smith  
Registration No. 34,074

DFS/XL

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c/o GOWLING LAFLEUR HENDERSON LLP  
160 Elgin Street, Suite 2600  
Ottawa, Ontario  
K1P 1C3  
CANADA

Telephone: (613) 233-1781  
Facsimile: (613) 563-9869

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